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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/516,840

05/16/2005

Michitaka Suto

71,039-002

4273

27305

7590

03/12/2007

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EXAMINER

ZIMMER, MARC S

ART UNIT

PAPER NUMBER

1712

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/12/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/516,840

Applicant(s)

SUTO ET AL.

Examiner

Marc S. Zimmer

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 9, 10 and 14 is/are allowed.
- 6) ☒ Claim(s) 1-8 and 11-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 04/11/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

Claims Analysis

It is noted for the record that whereas many of the claims are directed, at least in part, to an unsupported, crosslinked polyorganosiloxane film, no such requirement of claims 1-4 is made. That is to say, the films described in these claims may, in fact, be unsupported or, alternatively, may exist as laminates on a substrate. In this way, they are not unlike perhaps hundreds of other films disclosed in the prior art that are derived from hydrosilylation-curable polysiloxanes. Claim 5 simply describes an addition-curable polysiloxane composition and is anticipated by a litany of documents in the patent literature.

The word "film" as described in the 14th edition of *Hawley's Chemical Dictionary* is a thin continuous sheet of a substance having no precise upper limit of thickness but is reasonably less than 0.010 inches thick. While the Examiner is not attaching an upper limit to the thickness of an anticipatory film, consistent with the aforementioned definition, it is believed that any practical interpretation of the claim would require that a similar article being described by the prior art should probably have a thickness not more than double the thickness advocated by *Hawley's*.

Concerning claims 9-13, it is the position of the Examiner that a reference must provide some indication that the silicone layer of a described laminate structure has the mechanical properties necessary for that layer to exist as a self-supporting film. For instance, the prior art describes many times a metal film coated with a silicone-based adhesive (the Examiner believes that a laminated film featuring a silicone layer on an inorganic layer is physically indistinguishable from a laminated film wherein a metal

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layer is applied on top of a silicone layer). Clearly, the adhesive layer would not constitute a self-supporting layer in the context of Applicant's invention. This is but one example of an article known in the prior art that resembles the claimed invention in some respects but fails to satisfy all of the required attributes.

Finally, concerning the light absorption behavior expressed in claims 4, 9, and 14, the ability of a molecule to absorb radiation at a particular wavelength is a product of structure, i.e. the atoms that make up the polymer and their connectivity. Unless a prior art document discloses a polysiloxane containing substituents that differ greatly in structure from those set out in the claims, the absorption behavior will be considered to be inherently satisfied.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-8 and 11-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Each of these claims either expressly recites as one attribute of their invention an, "unsaturated aliphatic group *in one molecule.*" This is clearly an inaccurate characterization of one of the polymer materials included in Applicant's invention. As the Examiner understands the invention, a favored embodiment is one wherein the crosslinkable polymer contains alkenyl substituents in every molecule, and more than one alkenyl group at that so as to impart crosslinkability to said polymer. To clarify the Examiner's own description, it is appreciated that the

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avored embodiment is one wherein one of the polymer materials contains alkene-functionalization and the other contains hydrosilyl groups and, hence, not every polymer molecule necessarily contains alkenyl substituents. Better stated, every molecule of the base polymer contains alkenyl substitution and every molecule of the crosslinking agent contains hydrosilyl groups.

The Examiner submits that Applicant should simply restate this aspect of the invention by removing the phrase "in one molecule" while being clear that there are a plurality of alkenyl groups in this component.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(b) as being anticipated by Kushibiki et al. U.S. Patent # 5,739,948. They disclose a refractive index modulation device featuring as one aspect of their invention a polysiloxane film applied onto a light propagating medium. According to column 2, lines 53-55, there is no specific absorption band between 350 and 1600 nm and the transmissivity is above 80% in this

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range. The polysiloxane resins are relatively unlimited in their structure any may include MT and MQ resins (top of column 4) containing groups that enable them to be crosslinked by addition-type reactions (column 4, lines 58-60, column 5, lines 7-15).

Claims 1 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Ona et al., U.S. Patent # 4,557,887. See the abstract and the description of the polymer materials that comprise the addition-curable composition in column 2, lines 30-60.

Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(e) as being anticipated by Imai et al., U.S. Patent # 6,358,615. A rubber connector is described containing alternating layers of silicone rubber carrying electroconductive particles and insulating silicone rubber layers devoid of electroconductive particles. The detailed description mentions both hydrosilylation- and peroxide-curable polysiloxanes as suitable for the manufacture of the connectors. Relevant to the present discussion, a method is described in column 10, lines 12-39 wherein an insulating silicone rubber is applied to a PET film followed by the application and curing of an electroconductive polyorganosiloxane layer. Thereafter, the silicone film is peeled away from the PET film.

Claim 4 is not rejected over this reference because the Examiner believes that the light transmission properties are probably not satisfied due to the presence of metal particles in one layer of the film.

Claims 1, 5, and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 52-86985. The abstract describes an addition-curable composition used in

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preparing the film and the title indicates that it is easily peeled away from whatever substrate over which it had been applied.

As with Imai, claim 4 is not rejected over this reference because silica powder is apparently a required component of the film-forming composition and its impact on transmissivity is unknown without knowing more about the silica itself such as, for instance, the particle size of the silica.

Claims 1 and 4-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Ito et al., JP 4-20570. This reference describes yet another easily peelable silicone rubber composition comprising materials typical of a hydrosilylation-curable polysiloxane composition.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kushibiki et al. U.S. Patent # 5,739,948. While not explicitly described by the reference, it is the Examiner's position that MT and MQ resins containing alkenyl groups, or even SiH groups, in the M units are obvious to the skilled artisan in view of teachings alluded to *supra*.

Allowable Subject Matter

Claims 7 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. All of the references used to reject claim 6 seem to teach nothing other than the utilization of linear polysiloxanes though the Japanese references have been submitted for a full written translation to confirm this belief. Claims 9-14 are allowable over the prior art.

As an aside, Applicant is advised that the Examiner has reserved any non-statutory type double patenting rejections for a later stage of prosecution with the expectation that there will be at least substantial changes to, if not outright cancellation of claims 1-5. These claims are incredibly broad in their scope and it wouldn't be unreasonable for the Examiner to formulate rejections of these claims over any reference disclosing a film derived from similar materials, there probably being literally dozens of references over which a double patenting rejection would be merited.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


MARC S. ZIMMER
PRIMARY EXAMINER